

## AQUASHIELD 100GG

Polymer-modified, flexible  
cementitious waterproofing coating

### GENERAL DESCRIPTION

AXEL AQUASHIELD 100GG is a double component flexible premixed polymeric cement base waterproofing coating system. The flexible nature of the slurry when mixed provides a very good sealant over concrete or timber surface. It is very smooth when moulded over portable water tanking requirements or areas that require shifts in thermal movements.

AXEL AQUASHIELD 100GG grade can be used over R.C roof slab with sufficient movement joints over screed to fall or over coated with AXEL DERAM 102.

### RECOMMENDED USES

Used as a waterproofing coating lining to concrete structures:

- \* Basements
- \* R.C flat roof
- \* Concrete tanks
- \* Floor or foundation slabs
- \* Reservoirs, swimming pools
- \* Wet rooms for example kitchens, waste water treatment plants, shower rooms and laundries
- \* Tunnels
- \* R.C Gutters
- \* Planter boxes
- \* Bathroom floors and walls
- \* Pre-cast panels and retaining walls

### CHARACTERISTICS & ADVANTAGES

- \* Flexible
- \* Seamless
- \* Impermeable
- \* Economical
- \* Hardwearing
- \* Protects concrete from deterioration, oxidation, efflorescence, corrosion and spalling
- \* Environmentally friendly and non-toxic
- \* Easily applied by roller or brush
- \* Mixes and applies easily
- \* Excellent adhesion
- \* Good crack bridging capability



### COVERAGE

Minimum 2 coats at approximately 1.0kg/m<sup>2</sup> per coat.  
For areas subject to high water ingress, apply third coat at 1.0kg/m<sup>2</sup>

#### Note:

- \* AXEL AQUASHIELD 100GG must be applied in minimum of 2 coats
- \* 3 coats may be required in areas of extremely high infiltration

### COLOURS

Part A: Grey powder    Part B: White liquid  
Part A + Part B (mixed mortar): Dark grey slurry

### PACKAGING

28 kg per set (Part A: 18 kg per bag, Part B: 10 kg per bottle)

### STORAGE

Store in a dry, cool and shaded place. Protect from frost and direct sunlight.



### SURFACE PREPARATION

Proper substrate preparation is critical for optimum performance. Surfaces should be structurally sound, clean and free from loose particles, oil, grease or any other contaminants. Ensure that all concrete bases are cured for at least 28 days. Repair all cracks, unsound concrete or honeycombs with **AXEL EMBED 301R** or **AXEL EPOJECT 304i** repair grout.

### METHOD OF APPLICATION

- \* Mix **AXEL AQUASHIELD 100GG** part A and B in a clean container with a ratio of 1.8: 1. Mix with a power stirrer for at least 3 minutes until a homogeneous component is achieved.
- \* Pre-soak surface with water and ensure no ponding of water during application.
- \* Apply first coat using a roller or broom, brush in one direction at the rate of 1.0kg/m<sup>2</sup>. Allow to dry for 2-3 hours (depending on weather conditions).
- \* Apply second coat by using roller or broom, brush in opposite direction at the rate of 1.0kg/m<sup>2</sup> per coat. Allow longer coating interval of 24 hours to 48 hours if humidity or ventilation is not sufficient.
- \* Allow longer curing time of 7 to 14 days after completion before compounding of water.

Note:

Ensure sufficient ventilation when used in confined conditions. E.g. reservoirs, water tank high humidity may retard drying and curing of **AXEL AQUASHIELD 100GG**.

### CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use. Hardened or cured material can only be mechanically removed.

### TECHNICAL SPECIFICATIONS

|                                     |  |
|-------------------------------------|--|
| No. of components                   | Two  |
| Mixing ratio                        | Part A : Part B = 1.8 : 1 (parts by weight)  |
| Specific gravity                    | Part A: ~1.25 kg/litre    Part B: ~ 1.02 kg/litre<br>Part A + Part B (mixed mortar): 1.46 kg/litre                     |
| Pot life (28°C)                     | ~ 30 minutes<br>Time may vary depending on temperature and humidity  |
| Bonding strength to concrete        | > 0.5 MPa  |
| Tensile strength                    | Approximately 1.3 MPa  |
| Elongation at break                 | > 100 %  |
| Water absorption (BS1881-122: 1983) | 0.22 % (average corrected adsorption)  |
| Toxicity                            | Non-toxic<br><u>Complied standard:</u><br>- SIRIM Eco-Label under category ECO 019<br>- Registered under SPAN Malaysia |

| Test Parameters                 | Standard                           | Unit  | Results      |
|---------------------------------|------------------------------------|-------|--------------|
| Cadmium (Heavy metal)           | IEC 62321-5                        | % w/w | ND, < 0.0001 |
| Lead (Heavy metal)              | IEC 62321-5                        | % w/w | ND, < 0.0001 |
| Total Chromium (Heavy metal)    | IEC 62321-5                        | % w/w | ND, < 0.0001 |
| Mercury (Heavy metal)           | IEC 62321-4                        | % w/w | ND, < 0.0001 |
| Volatile Organic Compound (VOC) | ISO 11890-2                        | g/l   | ND, < 0.1    |
| Total Halogenated Compounds     | ISO 11890-2                        | % w/w | ND, < 0.001  |
| Total Aromatic Organic Solvents | ISO 11890-2                        | % w/w | ND, < 0.001  |
| Epichlorohydrin                 | ISO 11890-2                        | % w/w | ND, < 0.001  |
| N-Methyl-2-pyrrolidone          | ISO 11890-2                        | % w/w | ND, < 0.001  |
| Formaldehyde                    | CEST/TP/AE/ IN-HOUSE<br>034 (HPLC) | % w/w | ND, < 0.001  |
| Nonylphenol Ethoxylate (NPEO)   | LC-MS-MS                           | % w/w | ND, < 0.002  |
| Octylphenol Ethoxylate (OPEO)   | LC-MS-MS                           | % w/w | ND, < 0.002  |
| Flash point                     | ISO 13736                          | °C    | ND           |

\* ND represents Not Detected

\* Remarks: Above mentioned test was conducted by SIRIM QAS International Sdn. Bhd. as part of the Eco-Labeling Certification License Scheme.

## COMPLIANT STANDARDS FOR DRINKING WATER EXPOSURE

- 1) **MS 1583 Part1: 2003 Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water by SIRIM QAS International Sdn Bhd, Malaysia:**

AXEL AQUASHIELD 100GG exhibited no cytotoxicity response under the conditions of test.



- 2) **Green Label Certification under SIRIM Eco-Labeling Scheme:**

AXEL AQUASHIELD 100GG is certified with SIRIM Eco-Labeling Certification License compliant with the standard "SIRIM ECO 019: 2019" for "Paints and Coatings" by SIRIM QAS International Sdn. Bhd. as part of the national Eco-labelling programme of Malaysia. The test results showed that the product has close to zero VOC and toxicity content, hence making it an environmentally friendly product.

**Certification No.: EL000229**



- 3) **Registered under Suruhanjaya Perkhidmatan Air Negara (SPAN), Malaysia.**

AXEL AQUASHIELD 100GG is certified by SPAN to be used in the water services industry in Peninsular Malaysia and Federal Territory of Putrajaya and Labuan.



## SHELF LIFE

12 months from the date of production if stored properly in original, unopened and undamaged sealed packaging in dry conditions.

The above data is provided in good faith and to the best of our knowledge. However, since application and services conditions are beyond our control, we do not accept liability relating to coverage, performance and injury arising from the use of our products based on the data. Further with the constant advancement of technology we reserve the right to modify data without prior notice and we advise that you check with our Axelchem Technical Department at Tel: 603-6276 2118 the validity of these data especially if more than six months have lapsed since issue.